Transformations

A Report of Stewardship 1998



Transforming Patient Care

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Rush-Presbyterian-St. Luke's Medical Center

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New Tools for Healing:

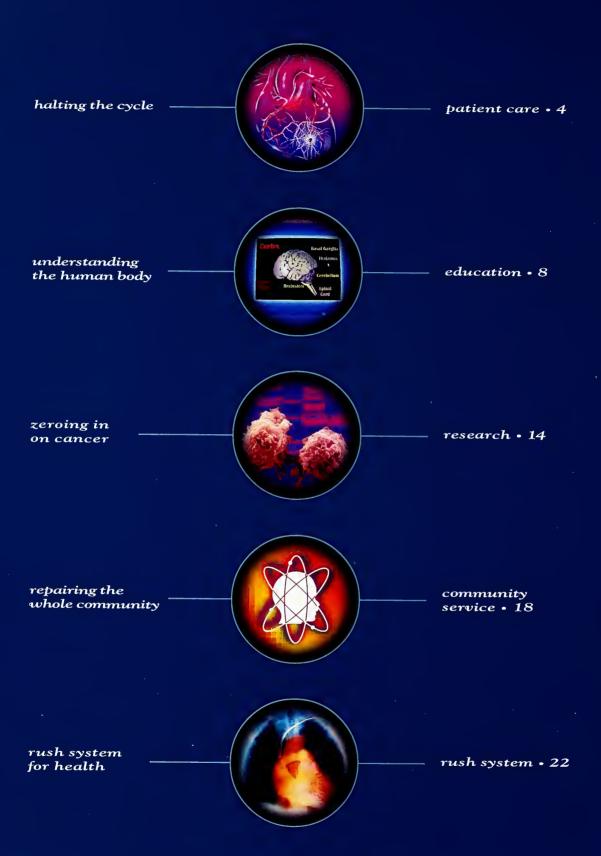
Transforming Patient Care

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Transformations





In the past year, Rush has
continued to do what it does best in new ways.

Scientists can now see the receptors on the surface
of cancer cells and can interfere in cell division, stopping the
cancer without harming the patient. A cardiologist in Chicago can
examine the heart of a child in Aurora, using technology that allows
Rush specialists to help more and more people efficiently. We can

evaluate the many biochemical factors that cause heart disease, and design ways to stop the disease in its tracks. These advances are transforming the way we approach our mission of patient care, education, research and community service.

 $oldsymbol{A}$ s an academic medical center, Rush is part of an international community of clinicians, scientists, educators and public health experts. This learning and healing community works to find answers for patients with perplexing symptoms and problems that keep them from living long and healthy lives.

By sharing research findings with colleagues around the world, our scientists have contributed to a growing understanding of the human body. Through firsthand experience of a broad and unusual variety of illnesses, our doctors have developed innovative treatments for many complex diseases.

But that is never enough.

Those who have the privilege of serving others must continually strive to help those they serve in better ways. So we are fortunate that as we approach the new century, medical science is on the verge of a new understanding of the human body and of how diseases develop. After years of work, doctors recognize the myriad factors within and outside the blood vessels that contribute to the development of coronary artery disease. Armed with this information, we can now design effective methods to stop the disease at earlier stages.

Transformations

We have new insight into the genetic breakdown that leads to some cancers. This has led to revolutionary treatments that target the cancer and spare healthy cells. Our new Robert H. and Terri

Cohn Research Building, now under construction, will house a molecular medicine center. Through the center, scientists will continue to break ground on understanding cellular changes that contribute to many disease processes, including cancer and heart disease.

Our increased understanding of the way that young men and women learn has led us to explore new methods of teaching them to become analytical and caring healthcare professionals. And our awareness of the societal ills that do more than any bacteria to destroy the health of a community has inspired us to design bold solutions to the problems of poverty.

Now in its fourth year, the Rush System for Health has learned to use each member's clinical strengths to help patients throughout the region. The System is also developing many collaborative programs that bring tertiary services to community settings.

We will continue to build on the knowledge of today to improve the health of those we serve now and into the next century.

Marshall Field Chairman

Marshall Field Les moderness no Leo M. Henikoff, MD

President and Chief Executive Officer



As we approach the new century, medical science is on the verge of a new understanding of the human body and of how diseases develop.



Intervention

Halting the Cycle

Banker Peter Mare and his son, Quentin, an acting student, have a lot in common: a love of fine art, a passion for golf and extremely high cholesterol. A genetic disorder, hereditary high cholesterol can cause heart attacks in men as young as 20 years old.

Although both father and son had been taking medication for the problem since the early 1980s, their cholesterol remained high. In fact, it was so high that cholesterol deposits had formed on the tendons in their heels. Shortly after Peter Mare was referred to the Rush Heart Institute's preventive cardiology program in 1994, he suffered chest pain: Doctors found he needed angioplasty to open blocked arteries in his heart. Rush cardiologists placed him on new cholesterol-lowering medicine that dramatically reduced his cholesterol levels. He soon brought his son in for an appointment.

Exhaustive tests revealed that Peter Mare had a variety of problems that did not show up on standard screening tests. He had abnormally high low-density lipoproteins, or "bad" cholesterol, and very low high-density lipoproteins, or "good" cholesterol. Doctors found that his blood had too much fibrinogen, a protein that causes the blood to clot and can contribute to heart attacks. And he had high levels of homocysteine, a protein recently linked to increased risk of heart attack and to death from heart disease.



Peter Mare (center) at his office with his son, Quentin, an acting student. • Robert Rosenson, MD, with a patient in the preventive cardiology program.

Doctors designed a multi-pronged plan of medication, exercise and diet to try to stop the progress of his heart disease. Through a combination of medication, diet and vitamin therapy, Peter Mare's blood cholesterol levels are now good, his homocysteine and fibrinogen levels are normal, and his coronary artery disease has halted. Quentin takes three medications to keep his cholesterol at a healthy level. Father and son look forward to many years of golfing and exploring art museums together.

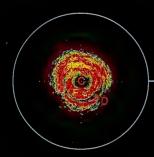
This year, hundreds of men and women have participated in the preventive cardiology program of the Rush Heart Institute. The program has been designed to intervene in the course of heart disease at whatever stage the patient seeks treatment. Doctors, nurses, nutritionists and psychologists evaluate the myriad factors that singly or in combination contribute to the patient's heart disease. Armed with this information, they develop individualized plans that combine drug therapy with a "prescription" for necessary lifestyle changes, including exercise, diet and stress management. Researchers at the Rush Heart Institute work to improve understanding of how heart disease develops and to find better ways to help patients stop their heart disease and live long and healthy lives.

Heart disease is the most common chronic illness and the most deadly, taking 1 million American lives annually.

Physicians and scientists throughout the Medical Center are exploring ways to prevent or stop a variety of diseases in addition to heart disease.



Rush is participating in a study funded by the National Institutes of Health examining the use of an ACE inhibitor, a blood-pressure lowering medicine, to prevent second heart attacks. Participants in the study have had heart attacks but have sustained relatively little damage to the heart. The goal is to prevent further damage to the heart muscle.



Physicians are participating in clinical research on aggressive cholesterol-lowering therapy for people who have normal cholesterol levels but have had heart attacks or chest pain. Patients will be examined over a period of five years to see if the new treatment can stop the progression of heart disease.



Each year, nearly 1 million Americans injure the crescent-shaped cartilage in the knee joint, called the meniscus. Untreated, this injury often leads to painful arthritis of the knee. Doctors at the Rush Arthritis and Orthopedics Institute are using arthroscopic surgery to transplant cartilage from a donor to replace the torn cartilage. Cartilage transplant may eliminate the need for joint replacement later.



Back injuries account for countless days lost from work each year and can create lifelong problems for sufferers. Researchers, including epidemiologists and physicians in orthopedics, occupational medicine and preventive medicine, are studying the use of lifting belts in preventing long-term low back problems in workers who have had back injuries.



Exploration



Understanding the Human Body

Students cluster around computer screens, calling up X-rays, blood test results, even watching video clips of patients, as they master the rudiments of anatomy and physiology. A chaplain in his study discusses an ethical issue with classmates 800 miles away. A nursing student asks a stimulating question and sees that her teacher is pleased, even though they are 50 miles apart.

Just as medical scientists continually search for better ways to diagnose and treat disease, health science educators look for better ways to prepare tomorrow's doctors, nurses and other health professionals. This year, faculty and students at Rush University are expanding the ways in which they teach and learn.

Rush Medical College was among the pioneers in medical education when it introduced its alternative curriculum in 1985. The curriculum brings first-year medical students in contact with patients, and teaches them using problem solving in small groups rather than traditional lectures. Students might be given a problem: A 46-year-old man comes to the doctor's office complaining of a headache and tingling in his foot. As they try to figure out his problem over the course of many hours of study, they will learn about clinical diagnostic techniques and also learn principles of anatomy and physiology.



First-year medical students in the anatomy lab. • Nursing students making rounds with their teacher.

This year, the Medical College is laying the groundwork for a new curriculum that will blend the traditional and alternative curricula, and expose students to clinical as well as basic science courses beginning with the first day of school. A new tool supporting these efforts is the McCormick Educational Technology Center, which opened for the 1997-98 academic year. The center allows students and teachers to work in small or large groups, all networked on computers.

Medical students have not abandoned the lecture hall or gross anatomy lab, where they study the human body via dissection. But computers offer the added help of 24-hour-a-day "tutors" and support the newest trend in healthcare education — learning from one another as well as from teachers.

Many educators believe that problem solving, rather than rote learning, provides skills that enhance the diagnostic abilities of physicians in practice. In fact, Rush University faculty have published and presented papers around the world on problem-based learning, and on using the computer to aid learning.

<u>NEW WAYS OF LEARNING FLOURISH AT RUSH UNIVERSITY</u> Innovative learning approaches are flourishing throughout Rush University, a senior health sciences university consisting of Rush Medical College, the College of Nursing, the College of Health Sciences and the Graduate College.

In an initiative that spans 12 healthcare disciplines and is conducted at six clinical sites in Chicago, Rush is providing graduate education in caring for the elderly through the Rush Geriatric Interdisciplinary Team Training Program. With support from the John A. Hartford Foundation, more than 200 trainees from the medical, nursing and health sciences colleges of Rush University and from Loyola University's School of Social Work are participating in this training and education program.

Many educators believe that problem solving, rather than rote learning, provides skills that enhance diagnostic abilities of physicians in practice.

The program is problem-based in nature. It encourages trainees to recognize that even seemingly trivial treatment decisions can have a major impact on an elderly patient. For instance, prescribing an expensive medication may force a person on a fixed income to choose between medicine and food.

Students see patients in teams out in the field, which includes patients' homes, outpatient physician offices and other clinical settings. The social workers, occupational and speech therapists, dietitians, resident physicians and nurses who take the course learn from one another as they assess the patient's problems and how to deal with the emotional, social, financial and physical factors that may impair the patient's ability to get well.

College of Nursing Expands Teaching Role

Rush College of Nursing, a national leader in undergraduate and graduate nursing education, is now providing all the professional development programs for nurses at Oak Park Hospital. This allows nurses at a community hospital to receive university-based training and continuing education. The College of Nursing received a grant this year to develop long-distance classes for acute-care nurse practitioners. Nurses will soon be able to take some classroom courses via the Internet.

The College of Health Sciences

<u>COMMUNICATION DISORDERS AND SCIENCES</u> Patients with Parkinson's disease, a neurological disorder that affects movement, are often unable to project their voices loudly enough to be heard. A researcher in the department of Communication Disorders and Sciences is employing a newly developed treatment that appears to help patients with Parkinson's disease speak more clearly.





PhD student Melanie Hart in an immunology lab. • Ethics student and attorney Dan Seltzer, his wife, Gail, and daughter Amanda online with his ethics class.

<u>VIRTUAL CLASSROOM IN HEALTHCARE ETHICS</u> Healthcare professionals live a harried existence. Beeper always at hand, they have no regular schedules, but must be ready to respond to a patient in need or a family in crisis. At the same time, they are increasingly called upon to advise on issues of ethics. Should a 92-year-old father with Alzheimer's disease be tube fed when he can no longer eat? Should parents authorize high-risk surgery for their one-pound preemie daughter?

To meet their time restrictions and provide a solid background for health professionals to help people sort out these issues, the department of Religion, Health and Human Values in the College of Health Sciences has devised an online ethics course. Leading to a certificate of graduate study in healthcare ethics, the course consists of three three-hour classes that can be taken entirely on the Internet. From registration to examinations, students can participate whenever they can squeeze the class into their busy schedules. Once a week, students "chat" from their computers during an online case presentation or, if this is not possible, they can review transcripts of the discussion at their convenience.

The Graduate College

The Graduate College of Rush University, which educates students in basic science research, has inaugurated a program for students to pursue dual degrees in basic science research and medicine. Called the Rush Physician-Scientist Program, the curriculum seeks to encourage outstanding students interested in becoming physicians to pursue laboratory science in disease-related research. Students completing the rigorous seven-year program will graduate with both MD and PhD degrees.

Rush-Presbyterian-St. Luke's Medical Center is uniquely suited to offer an MD-PhD program, because the institution strongly supports collegiality among physician-researchers and laboratory scientists. Patient problems are readily discussed with the laboratory scientist, and laboratory findings are more quickly translated into improved treatment for patients.

Innovative learning approaches are flourishing in the Medical College and throughout Rush University.



Rush Medical College faculty are principal investigators in a study, funded by the Office of Naval Research, to produce a computerized tutorial model for medical students, and are conducting research funded by the National Science Foundation to measure the effectiveness of problem-based learning.



A new statewide Newborn and Infant Hearing Screening group, headed by the chair of Rush's Communications Disorders and Sciences department, is pushing Illinois health officials to adopt a universal hearing screening test for newborns. Undetected hearing loss among infants causes delayed language development, which can lead to later social and emotional problems and failure in school.



- An epidemiologist in the department of Health Systems Management, Rush's healthcare administration program, is principal investigator for a \$1.9 million study of low-back rehabilitation for work-related back injuries. Funded by the United Auto Workers-General Motors National Joint Committee on Health and Safety, the award is the largest ever provided by UAW-GM to an institution for research. Other investigators include Rush Medical College researchers in orthopedic surgery, occupational medicine and preventive medicine.
- In its accreditation renewal report issued in spring of 1998, the North Central Association singled out problem-based learning among the great strengths of Rush University. And the Association of American Medical Colleges, in its accreditation renewal report for Rush Medical College, cited its innovative and flexible curriculum and early introduction of patients to students among strengths of the college.



Revolution

Zeroing in on Cancer

In 1995, Lisle, Illinois, resident Stephanie Holstlaw heard the news all cancer patients dread: Her cancer had come back. Diagnosed at age 37 with a particularly aggressive form of breast cancer, she was treated with surgery and chemotherapy in 1989, and had enjoyed six years of health. When it recurred, the cancer raged on despite three rounds of chemotherapy and a bone marrow transplant.

Today, Holstlaw, a travel agent, is off on her own adventures, touring Scotland with her husband, visiting her daughter at college and exploring Chicago and its suburbs on weekends. Her cancer has stopped, thanks to a new biologic therapy under investigation this year at the Rush Cancer Institute, that cancer experts see as a major breakthrough in cancer treatment.

Rush was one of 52 sites in eight countries taking part in several studies of a drug called Herceptin. The drug is so promising that the federal Food and Drug Administration scientific advisory panel unanimously recommended immediate approval for use by oncologists. And the drug appears to be nontoxic, with none of the side effects associated with chemotherapy, such as nausea and hair loss.



Stephanie Holstlaw at the Downers Grove Farmers' Market.

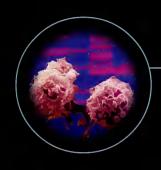
Holstlaw receiving Herceptin treatment at Rush

Herceptin, a monoclonal antibody, targets the HER2 gene product, a protein that is produced excessively in a particular form of breast cancer that accounts for about 30 percent of the 180,000 new cases of breast cancer diagnosed each year in the United States. This excessive protein causes the cell to rapidly divide and become cancerous. A monoclonal antibody is a laboratory-manufactured solution containing millions of identical copies of a single antibody, all of which attack the same target. Monoclonal antibodies can locate cells wherever they are in the body. Like a stealth missile, Herceptin zeroes in on the protein of the cancer cell and binds to it, which appears to stop the cell from dividing. The National Cancer Institute is investigating the role of Herceptin in other deadly cancers.

Researchers at the Rush Cancer Institute are studying other biologic therapies that may revolutionize the treatment of cancer. Unlike chemotherapy and radiation, biologic therapies do not appear to harm healthy cells. When used with chemotherapy, they can boost the effectiveness of traditional treatments without causing further harm to patients.

Monoclonal antibodies are just one of several vitamin and nontoxic therapies on the horizon in cancer treatment.

Other studies under way at Rush are exploring new treatments and new ways of giving conventional treatments.



Researchers are conducting clinical trials on treating advanced stages of lung cancer with metalloproteinase inhibitors in combination with chemotherapy and radiation. Metalloproteinase inhibitors are chemicals that block the action of enzymes created by the tumors themselves. They inhibit formation of new blood vessels, reducing tumor growth.



New applications for bone marrow transplants are being investigated. By administering the monoclonal antibody Rituxan in combination with chemotherapy in patients with chronic lymphocytic leukemia and low-grade lymphoma, researchers hope to "purge" bone marrow of cancer cells so that patients can use their own bone marrow for a bone marrow transplant.



In summer of 1998, construction was begun on Rush's new eight-story Robert H. and Terri Cohn Research Building, which will house a Center for Molecular Medicine where scientists will continue to work on developing biologic therapies for a range of diseases and problems. The building is expected to be completed early in 2000.



Scientists at Rush are exploring biologic therapies for treatment of a variety of diseases in addition to cancer. This year, rheumatology researchers in the Rush Arthritis and Orthopedics Institute completed clinical trials of a new drug for rheumatoid arthritis that works by blocking the cells' inflammatory responses. Rheumatoid arthritis is a disease in which the body mounts an immune response against its own tissues, causing painful inflammation and destruction of joints. Rush was the only site in Illinois testing the drug, which the Food and Drug Administration is expected to approve in November 1998.



Restoration



Repairing the Whole Community

Less than two miles from the reinvigorated Near West Side, with its fashionable lofts and trendy restaurants, is a neighborhood that is hoping to be next.

A 1990 survey of North Lawndale by the Chicago Department of Public Health would seem to dampen that hope: Out of a population of 48,000, almost half were below the poverty line and more than a quarter were unemployed. Two-thirds of households were headed by women, almost 60 percent of them on public aid. Nineteen out of every 1,000 babies born died before their first birthday, a rate more than double the national average.

Today, close to 200 families are living in new homes, and many of them are homeowners. In the past year, a Walgreen's and a Cineplex Odeon movie theater have opened, and they will soon be joined by a shopping center. Leading the way in the redevelopment was the Rush Homan Square Health Center, which opened in 1995. This year, the health center saw twice as many patients and launched several innovative programs designed for the unique needs of the Lawndale community.

North Lawndale is the focus of a public-private partnership to restore the health of the neighborhood by providing healthcare services, jobs, decent affordable housing and vital social and commercial services. Through the Rush Homan Square Health Center, the Rush Primary Care Institute is playing a key role in the restoration.

The Health Center, staffed by physicians and nurse-practitioners from the Rush Primary Care Institute, is filling a desperate need for healthcare services in a community where there is little access to medical care — many residents travel out of the neighborhood to receive primary care services in hospital emergency rooms. The center provides a safe haven for community residents. Focus is on preventive services and health education programs.







Patricia Potts, MSN, with community leader and patient Margaret Davis. • Hundreds of Lawndale residents attended a recent health fair.

This year, the center served 2,000 patients, providing vaccinations, checkups, prenatal care and other medical services to men, women and children of all ages. Besides offering healthcare services within the health center, Rush has formed partnerships with other organizations in Lawndale to develop special programs.

The second annual Start-With-Your Heart program was held this year, in cooperation with the Chicago Public Schools. The program teaches students about diet, exercise and how to have a healthy cardiovascular system. The five-week program expanded this year to eight elementary and high schools, and more than 1,000 students attended. This year, at parents' request, seven of the eight schools launched five-week Start-With-Your-Heart programs for adults, and weight-management classes were begun at the Health Center. This has particular importance in an African-American community, since the incidence of heart disease and death from heart disease and stroke is 40 percent higher among the African-American population.

The center shares space with Family Focus, a family social services organization dedicated to protecting children from the pressures of urban poverty. Family Focus-Lawndale helps people improve parenting skills, provides drop-in centers for families and enrichment activities for children. Family Focus refers patients with health needs to the health center, and patients needing social services can easily be referred across the hall.

Patients served reached 2,000, and monthly visits have doubled since last year.

Because of violence in the neighborhood and poor transportation, many elderly people seldom leave their homes, except to go to church.



• Rush will be a central member of the Homan Square Community Center, due to begin construction at the end of next year. A collaboration of Family Focus, Rush and the YMCA of Metropolitan Chicago, the Homan Square Community Center will serve as a key provider of essential neighborhood services.



One of the three major programs at Rush designed to serve the vulnerable of society, the Science and Math Excellence Network, a public-private partnership to improve the science and math skills of inner-city children, just completed its sixth year and now serves more than 2,000 school children from preschool through high school.



• More than 75 percent of Rush's medical students volunteer in the Rush Community Services Initiative Program, a project of Rush University faculty and students that provides a network of community programs using student initiative to address the social and healthcare needs of the community.



Collaboration

Rush System for Health

Every year, about 14 million Americans receive echocardiograms, one of the most powerful tools available to diagnose a variety of heart problems.

The test, which uses sound waves to produce a picture of the heart's structure and motion, is painless, noninvasive and safe. But about 20 percent of the time, the black-and-white images are not clear enough for the doctor to make a diagnosis.

A recent study conducted at Illinois Masonic Medical Center, Lake Forest Hospital, and several other sites showed that the clarity of echocardiograms can be improved by injecting the patient with harmless microscopic protein particles that illuminate the structure of the heart in vivid color. The study was led by a Rush-Presbyterian-St. Luke's cardiologist who helped develop the contrast agent.

The U.S. Food and Drug Administration funded the clinical trial to determine the safety and effectiveness of the contrast agent, called Optison. As a result of the study, the FDA approved the substance this year for use by cardiologists nationwide. By creating clearer images of the heart, contrast echocardiography enables physicians to make more accurate diagnoses and may eliminate the need for further invasive tests. The method promises to be useful with critically ill patients, a group that is difficult to diagnose using conventional echocardiography.

Patients at community hospitals in the Rush System for Health were able to participate in the study through the Rush Echo Laboratory Network, a consortium of echocardiography specialists in the Rush System for Health and affiliated hospitals. The Echo Lab Network is just one of several new programs under way this year that allow healthcare professionals in the System to share knowledge and resources to better serve patients.





Cancer patient Jack LaFond and his wife, Dianne, at their home in St. Anne, Illinois. • The Rush Institute for the Healthy Aging is designing new programs to help the elderly.

SHARING CLINICAL KNOWLEDGE In spring of 1998, the System quality improvement group completed a study of more than 1,000 patients admitted with pneumonia in eight System hospitals. Data gathered in the study compared medications, length of stay and severity of illness on admissions. Hospitals are examining the findings to better determine when to admit pneumonia patients to the hospital and how to treat patients most effectively.

IMPROVING LIFE FOR DIABETICS Each year, close to 800,000 people are diagnosed with diabetes. When not controlled, this incurable illness can lead to blindness, kidney failure, amputation and early death. The Rush System for Health has begun two new programs to help improve the health of diabetics.

• Rush System hospitals, under the leadership of a diabetes specialist from Rush North Shore Medical Center, are participating in a 13-month project to share information among 40 hospitals across the country about effective methods of treatment. Improvements in patients' control of their illnesses will be analyzed, as measured by blood tests, emergency room visits and hospitalizations.

Collaborative efforts are a major thrust of the Rush System's Clinical Council, comprised of physicians from all eight corporate affiliates.

The Rush Cancer Institute is developing a regional Cancer Center with Riverside Medical Center in Kankakee, 50 miles south of Chicago.

• Diabetic patients' diligence in taking medications and following dietary restrictions is key to their remaining relatively healthy. The Rush System Board has taken steps to make sure that all System hospitals develop diabetes education programs approved by the American Diabetes Association (ADA). A nurse-specialist in diabetes will oversee the program for the System. Studies show that programs meeting ADA standards help patients stay healthier.

GERIATRIC INITIATIVES The Rush Institute for Healthy Aging is conducting research to determine the best way to allow memory-impaired older adults to remain at home as long as possible. Funded by the National Institutes of Health, the three-year study is designed to help aging experts develop the best programs for elderly people with Alzheimer's disease and other dementias. The over-85 population is growing rapidly, and nearly half of those people have some form of dementia.

RUSH CANCER INSTITUTE REACHES OUT To allow patients at outlying hospitals the chance to receive a treatment often only available at tertiary-level medical centers, the Rush Cancer Institute has established a program in stem-cell transplantation, a type of bone marrow transplant, at Rush-Copley Medical Center in Aurora, Ill., and Community Hospital of Munster, Ind. Physicians from the Rush Cancer Institute develop guidelines for all procedures, ensuring that patients receive the same quality of care as if they had traveled to Rush-Presbyterian-St. Luke's Medical Center. When necessary, patients travel to Rush to receive more complex treatment and return to the community setting for follow-up care.

The Rush Cancer Institute is developing a regional Cancer Center jointly with Riverside Medical Center in Kankakee, 50 miles south of Chicago. Cancer specialists from Rush will collaborate with Riverside Medical Center physicians in providing patient care, including radiation therapy, for patients who live as far south as Springfield. Suburban and rural patients served by the Kankakee hospital will be able to participate in leading-edge treatments, including clinical trials of new therapies for cancer.



Patient Henry Moore and nurse Ann Sepachek, RN, in Oak Park Hospital's infusion lab at the Oak Park Heart Institute. • The CORE Center represents a public-private partnership.

Planning has begun to establish a program at Riverside in pediatric heart care, using telemedicine. Pediatric cardiologists at Rush Children's Hospital will conduct diagnostic tests on patients in Kankakee via fiberoptic cables in real time. A similar program is offered at Rush-Copley Medical Center in Aurora.

RUSH DOCTORS COME TO OAK PARK HOSPITAL In fall of 1998, Rush-Presbyterian-St. Luke's Medical Center assumed the management of Oak Park Hospital, a community hospital owned by the Wheaton Franciscan Sisters. The hospital has expanded primary care services, and patients can also see Rush specialists in the hospital's professional building. The hospital plans to offer obstetrical and pediatric services within the coming year.

In the last year, several new programs have been developed to provide access to the clinical and scientific resources of Rush for the community hospital's patients. Oak Park has opened a branch of the Rush Heart Institute staffed by a Rush cardiologist and is providing medical care from routine and preventive services to care for patients with advanced heart disease.

In early 1999, patients at Oak Park Hospital will be able to visit branches of Rush-Presbyterian-St. Luke's pioneering Comprehensive Breast Cancer Center and Advanced Lung Disease and Lung Transplant Program for patients with emphysema and other chronic lung diseases.

COOK COUNTY-RUSH INFECTIOUS DISEASES CENTER OPENS In late summer of 1998, Rush and Cook County Hospital, Illinois' largest private and public hospitals, opened the CORE Center, the first free-standing outpatient facility for people with HIV infection or other infectious diseases. The public-private partnership combines the expertise of Cook County in patient care with the educational and scientific resources of Rush. Patients will have an opportunity to participate in clinical trials of promising treatments.

Sharing knowledge and expertise in patient care will allow the System to develop a single standard of care for patients.



In a clinical study, 600 patients who received hip- and knee-replacement surgeries in hospitals throughout the System were studied to see how well they recuperated and how soon they were able to go home. The patients' progress will be monitored over the next year to see how they fare over the long term.

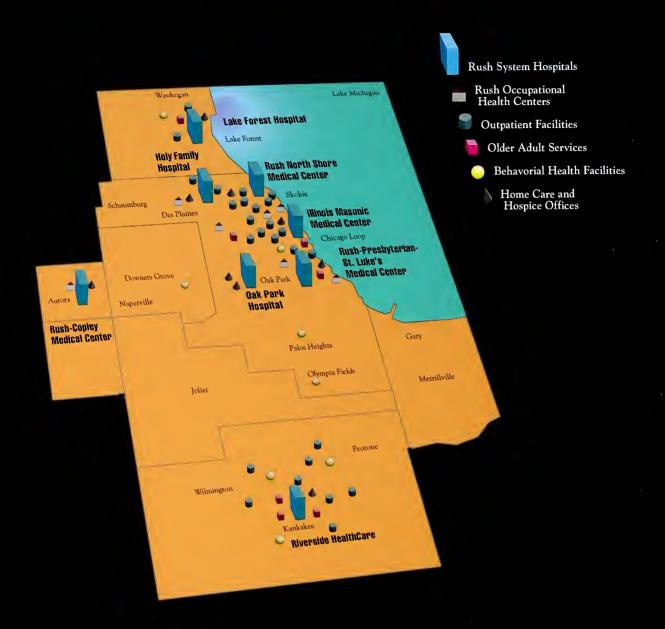


Bone marrow transplantation offers hope to patients with certain blood cancers or with metastatic breast and ovarian cancer. Through a procedure called blood stem-cell transplantation, the immature cells that will become blood cells are removed from either bone marrow or blood. Then chemotherapy is used to kill the cancer, and the stem cells are transplanted back into the patient. The hope is that the transplant will enable the patient to regenerate healthy blood cells to fight the cancer.



The System has established a clinical advisory group on heart care. It will allow cardiologists at all eight System hospitals to share information on diagnosing and treating heart disease and develop system-wide standards for the most effective and efficient care for heart patients. The arrangement will enable patients at community hospitals in the System to participate in clinical trials of new drug therapies and other treatments otherwise only available to patients at academic medical centers like Rush-Presbyterian-St. Luke's. Information on preventive and clinical care will be drawn from the whole System and shared to develop methods of best practice.

Rush System Map



Offering a full range of healthcare services, the Rush System for Health includes Rush Occupational Health, Rush Home Care Network, Rush Hospice Partners, Rush Prudential Health Plans, Rush Corporate Health Center, Rush Center for Women's Medicine and ArcVentures, a subsidiary.

Presbyterian-St. Luke's Hospital, a major referral center, provides care from the most basic to the most advanced for patients from metropolitan Chicago and across the country. Other patient-care components of the Rush System for Health are the Johnston R. Bowman Health Center for the Elderly, a rehabilitation and skilled nursing facility at the Medical Center; Rush-Copley Medical Center, in Aurora; Holy Family Medical Center, in Des Plaines; Illinois Masonic Medical Center, in Chicago; Lake Forest Hospital, in Lake Forest; Oak Park Hospital, in Oak Park; Riverside HealthCare, in Kankakee; and Rush North Shore Medical Center, in Skokie.

Rush System Combined Financial Summary

Balance Sheets (\$ in millions)

Assets

Current assets:

limited as to use

Other assets

Total assets

Donor-restricted investments for endowments and capital

Other

Fiscal Year ended June 30 1998 1997 Cash and investments \$ 310.3 \$ 300.0 Accounts receivable 256.6 272.8 19.7 22.9 Total current assets \$ 586.6 \$ 595.7 Property and equipment, net \$ 847.0 \$ 890.6 Marketable securities,

388.0

344.0

131.5

408.3

349.2

111.8

\$ 2,355.6

Liabilities & Net Assets

	Fiscal Year ended June 30		
	1998	1997	
Liabilities:			
Current liabilities	\$ 341.7	\$ 384.0	
Self-insurance programs	103.1	94.8	
Long-term liabilities	49.8	40.9	
Long-term debt	559.4	521.0	
Total liabilities	\$ 1,054.0	\$ 1,040.7	
Net Assets			
Unrestricted	\$ 832.1	\$ 876.0	
Temporarily restricted			
for specific purpose	250.6	118.3	
Permanently restricted			
endowments	160.4	320.6	
Total net assets	\$ 1,243.1	\$ 1,314.9	
Total liabilities			
& net assets	\$ 2,297.1	\$ 2,355.6	

Statement of Operations (\$ in millions)

\$ 2,297.1

Revenues	Fiscal Year e	nded June 30
	1998	1997
Patient services, net	\$ 1,187.8	\$ 1,248.4
University services	98.2	92.9
Investment income	44.6	38.8
Unrestricted contributions and bequests	6.0	4.7
Other, net	120.4	102.9
Total revenues	\$ 1,457.0	\$ 1,487.7
Expenses		
Salaries, wages and employee benefits	\$ 781.3	\$ 794.8
Supplies, utilities and other	526.2	521.7
Depreciation and amortization	93.0	100.3
Interest	30.7	32.3
Total expenses	\$ 1,431.2	\$ 1,449.1
Excess of revenues over expenses	\$ 25.8	\$ 38.6

Rush System Statistical Summary

Acute Hospital Operations

	Licensed Beds	Admissions & Observation Cases	Patient Days	Average Length of Stay	Operations Performed	Emergency Department Visits	Births
Presbyterian-St. Luke's							
Hospital & Johnston R. Bowman Health Center		33,063	187,548			35,186	
Rush North Shore							
Medical Center	268	10,194	59,424	5.8		17,435	
Rush-Copley							
Medical Center	142	9,642		3.7	7,051	27,338	1,840
Illinois Masonic	•					. ,	
Medical Center	517	21,850	93,441	4.3	9,550	34,837	3,834
Holy Family							
Medical Center	252	7,607	31,624			18,940	641
Oak Park Hospital	216	3,819	29,482	7.7	2,589		*
Lake Forest Hospital	116	7,877	24,178	3.6	7,270	•	2,233
Riverside HealthCare	336	9,776	48,159	5.8	7,310	29,440	982
Total Hospital & Health Services	2,810	103,828	509,726	5.3	68,333		12,350

* no pediatrics

Nursing Home Operations

	Licensed Beds	Resident Days
Warren Barr Pavilion	20.4	40.550
(Illinois Masonic Medical Center)	294	63,558
Westmoreland Pavilion	00	27.057
(Lake Forest Hospital)	88	27,957
Miller Center	100	25.665
(Riverside HealthCare)	100	25,665
Total Nursing Home Operations	482	117,180

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Bruce Campbell, DrPH
President and CEO
Illinois Masonic Medical Center

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John Frigo President Rush North Shore Medical Center

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Department of Radiology

Department of Radiology

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Oak Park Hospital Daniel Kruss, MD

Rush in Brief

Rush-Presbyterian-St. Luke's Medical Center

Rush-Presbyterian-St. Luke's Medical Center is the center of a comprehensive, cooperative healthcare system designed to serve some 3 million people through its own resources and in affiliation with other healthcare institutions.

It includes Rush University, which comprises Rush Medical College, the College of Nursing, the College of Health Sciences, the Graduate College, and a cooperative educational network of 14 liberal arts colleges and universities in six states from Tennessee to Colorado.

Rush is the center for basic and clinical research, with physicians and scientists involved in more than 2,000 investigations, many of them involving two or more disciplines.

The seven Rush Institutes draw together patient care and research to address major health problems, offering primary healthcare services as well as the latest treatments for arthritis and orthopedic problems, cancer, heart disease, mental illness, diseases associated with aging and neurological problems.

Presbyterian-St. Luke's Hospital Johnston R. Bowman Health Center for the Elderly Rush Children's Hospital

Medical staff	1,241
Professional nursing staff	970
Admissions and observation patients	33,063
Average length of stay in days	6.9
Patient days	187,548
Operations performed	22,113
Emergency department visits	35,186
Employees	7,250

Rush University	
Faculty and Staff	
Rush Medical College	2,655
College of Nursing	330
College of Health Sciences	228
The Graduate College	122
Medical Staff	1,241
Student Body	
Rush Medical College	487
College of Nursing	586
College of Health Sciences	208
The Graduate College	67
Rush University unclassified students	52
Residents and fellows	615
Research	
Research projects in progress	2,041
Research awards, 1997-1998	\$50,447,035

Licenses

Department of Public Health, State of Illinois City of Chicago

Approvals and Accreditations

Joint Commission on Accreditation of Healthcare Organizations

Commission for Accreditation of Rehabilitation Facilities

Liaison Committee on Medical Education

Department of Registration and Education, State of Illinois

North Central Association of Colleges and Schools

National League for Nursing

Council on Accreditation of Educational Programs for Nurse Anesthesia

American Dietetic Association

Accrediting Commission on Education for Health Services
Administration

Accreditation Council on Graduate Medical Education

Association for Clinical Pastoral Education

Commission on Accreditation for Allied Health Education
Programs: Accreditation Committee on Perfusion Technology

National Accrediting Agency for Clinical Laboratory Sciences

American Council for Occupational Therapy Education

American Speech-Language-Hearing Association Council on Academic Accreditation

Memberships

American Hospital Association

Illinois Hospital & Health Systems Association

Metropolitan Chicago Healthcare Council

Federation of Independent Illinois Colleges and Universities

Association of American Medical Colleges

American Association of Colleges of Nursing

American Association of Allied Health Professionals

Association of University Programs in Health Administration

Association for Health Services Research

Voluntary Hospitals of America

Academic Affiliations

Beloit College

Benedictine University

Carleton College

Colorado College

DePauw University

Fisk University

Knox College

Lawrence University

Macalester College

Monmouth College

North Central College

Ripon College

Rosary College

Wheaton College

Rush Financial Summary

Financial Report on Operations



The financial information provided on the following pages includes the operations of Presbyterian-St. Luke's Hospital; Johnston R. Bowman Health Center for the Elderly; Rush University; ArcVentures, Inc; and the Medical Center's share of the Rush Prudential Health Plans.

The operating results in fiscal year 1998 reflect a net income of

\$10.6 million. Cash and investments totaled \$562.4 million at June 30, 1998, up \$16.2 million from the beginning of the year. This amount includes donor-restricted investments for endowments and capital and Board designated investments, which totaled \$327.3 million. This increase reflects continued philanthropic support and growth in investments.

The endowment investments totaling \$307.3 million at year end earned a 17 percent return in 1998. Over the past five years, the endowment funds have earned an average 14 percent return.

The net assets, unrestricted and restricted, at June 30, 1998 were \$709.0 million, an increase of \$50.6 million from the prior year. This increase reflects the results of continued philanthropic support, increasing research awards, investment growth, and favorable operating results.

During the year, the Medical Center's hospitals cared for 27,164 inpatients and generated \$520.5 million in patient service revenues. Rush University received \$50.4 million in external research awards, 59 percent of which are from the National Institutes of Health. Capital outlays for the physical plant to support patient care, education and research were \$58.9 million in 1998. Total assets for the year increased \$63.2 million, to \$1.165 billion at year end.

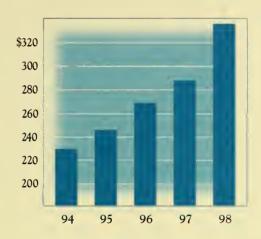
The Medical Center completed the year in a strong financial position. This continued financial strength will support the growth of the Medical Center and Rush University in the coming years.

James T. Frankenbach Senior Vice President

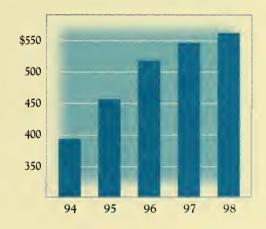
Corporate and Hospital Affairs

James T. Washing

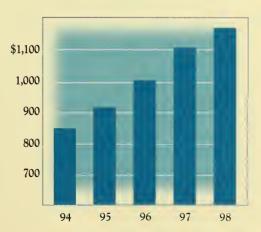
Unrestricted Fund Balance (\$ in millions)



Cash and Investments (\$ in millions)



Total Assets (\$ in millions)



Rush Financial Summary

Balance Sheets (\$ in millions)

Assets

	Fiscal Year ended June 30		
	1998	1997	
Current assets:			
Cash and investments	\$ 185.8	\$ 164.5	
Accounts receivable	134.8	140.9	
Other	7.5	6.6	
Total current assets	\$ 328.1	\$ 312.0	
Property and equipment, net	\$ 361.6	\$ 342.8	
Marketable securities,			
limited as to use	49.3	49.7	
Donor-restricted investments			
for endowments and capital	327.3	332.0	
Other assets	98.5	65.1	
Tatal	¢ 1 164 9	¢ 1 101 (
Total assets	\$ 1,164.8	\$ 1,101.6	

Liabilities & Net Assets

I	Fiscal Year e	nded June 30
	1998	1997
Liabilities		
Current liabilities	\$ 154.7	\$ 181.3
Self-insurance programs	65.4	54.9
Long-term liabilities	36.5	28.7
Long-term debt	199.2	178.3
Total liabilities	\$ 455.8	\$ 443.2
Net Assets		
Unrestricted	\$ 337.9	\$ 288.6
Temporarily restricted		
for specific purpose	227.4	64.7
Permanently restricted endowmen	ts 143.7	305.1
Total net assets	\$ 709.0	\$ 658.4
Total liabilities		
& net assets	\$ 1,164.8	\$ 1,101.6

Statement of Operations (\$ in millions)

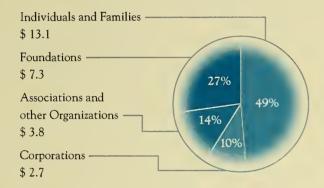
Revenues

11010111100		Fiscal Year en	ded June 30
	 	1998	1997
Patient services, net		\$ 520.5	\$ 482.7
University services		98.2	92.9
Investment income		24.7	16.9
Unrestricted contributions and bequests		2.1	2.1
Other, net		73.5	45.4
Total revenues		\$ 719.0	\$ 640.0
Expenses			
Salaries, wages and employee benefits		\$ 402.7	\$ 372.9
Supplies, utilities and other		259.5	213.5
Depreciation and amortization		35.2	34.7
Interest		11.0	10.6
Total expenses		\$ 708.4	\$ 631.7
Excess of revenues over expenses		\$ 10.6	\$ 8.3

Rush Philanthropy and Extramural Support

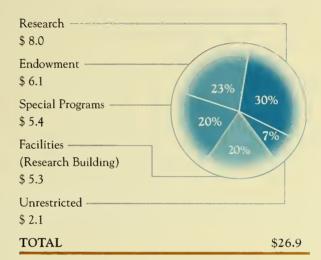
We would like to express our thanks to the 8,801 individuals, families, corporations, foundations, associations and other organizations that provided philanthropic support during the 1997-98 fiscal year for the people and programs of Rush-Presbyterian-St. Luke's Medical Center.

Gifts received by source (\$ in millions)



TOTAL Gifts and Pledges \$26.9

Gifts received by purpose (\$ in millions)



Number and Value of Endowed Chairs (\$ in millions)



(Includes contributions received and market appreciation)

Research Awards to Rush University (\$ in millions)



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William G. Ries President and Chief Executive Officer, Lake Forest Hospital

*deceased
As of September 10, 1998

Pamela B. Strobel

Richard L. Thomas





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